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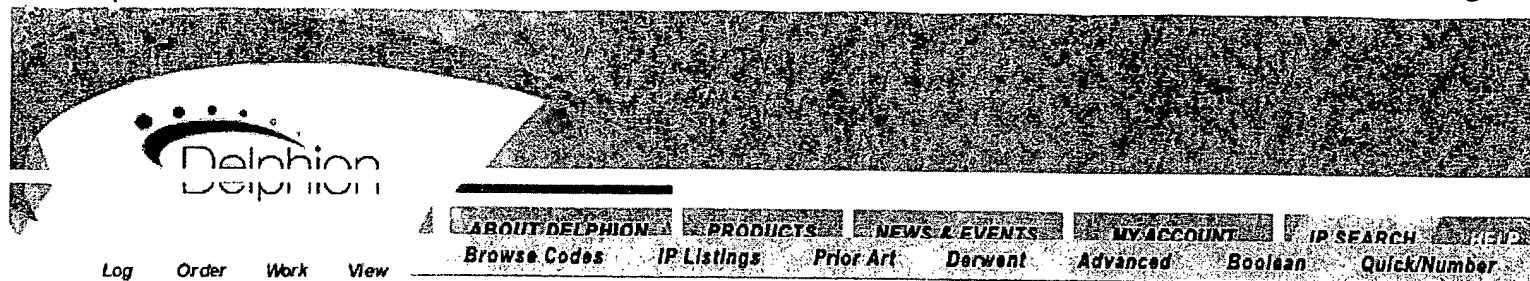
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Title: **JP10064549A2: NONAQUEOUS ELECTROLYTE SECONDARY BATTERY**
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Country: **JP Japan**
 Kind: **A**

Inventor(s): **MURAOKA NORIKI
 OZAKI YOSHIYUKI
 KOBAYASHI SHIGEO
 WATANABE SHOICHIRO**

Applicant/Assignee: **MATSUSHITA ELECTRIC IND CO LTD**
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Issued/Filed Dates: **March 6, 1998 / Aug. 23, 1996**

Application Number: **JP1996000222114**

IPC Class: **H01M 4/62; H01M 4/02; H01M 10/40;**

► [Interested in classification by use rather than just by description?](#)

Priority Number(s): **Aug. 23, 1996 JP1996000222114**

Abstract:

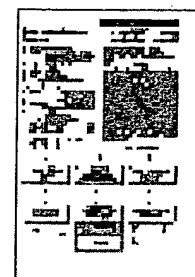


Problem to be solved: To suppress a rise in temperature of a battery caused by short circuit by containing a heat absorbing material of a polymer compound having a specified melting point and heat of fusion and a binder such as styrene - butadiene rubber in a positive electrode of a nonaqueous electrolyte secondary battery.

Solution: A nonaqueous electrolyte secondary battery has a positive electrode using a lithium containing composite oxide as an active material, a negative electrode comprising a carbon material capable of absorbing/releasing lithium, and a nonaqueous electrolyte. A polymer compound having a melting point of 90-130° C and a heat of fusion of 30J/g or more (such as polyethylene, polypropylene, and ethylene - ethyl acrylate - maleic anhydride copolymer) is contained in the positive electrode as a heat absorbing material, and has a globular shape of a mean particle size of 1-12µm, and the added content is 10% or less. As a binder, styrene - butadiene rubber, polyvinylidene fluoride, or polytetrafluoroethylene, etc., is contained in the positive electrode. The nonaqueous electrolyte secondary battery capable of satisfying battery characteristics and suppressing the rise in temperature of the battery when short circuit of the battery arose on the inside and the outside.

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Other Abstract Info: CHEMABS 128(16)194743Z CAN128(16)194743Z DERABS C98-222647
DERC98-222647

Foreign References: No patents reference this one



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(19)

(11) Publication number: **10064549 A**

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PATENT ABSTRACTS OF JAPAN(21) Application number: **08222114**(51) Intl. Cl.: **H01M 4/62 H01M 4/02 H01M 10/40**(22) Application date: **23.08.96**

(30) Priority:

(43) Date of application
publication: **06.03.98**(84) Designated contracting
states:(71) Applicant: **MATSUSHITA ELECTRIC IND CO
LTD**(72) Inventor: **MURAOKA NORIKI
OZAKI YOSHIYUKI
KOBAYASHI SHIGEO
WATANABE SHOICHIRO**

(74) Representative:

**(54) NONAQUEOUS
ELECTROLYTE
SECONDARY BATTERY**

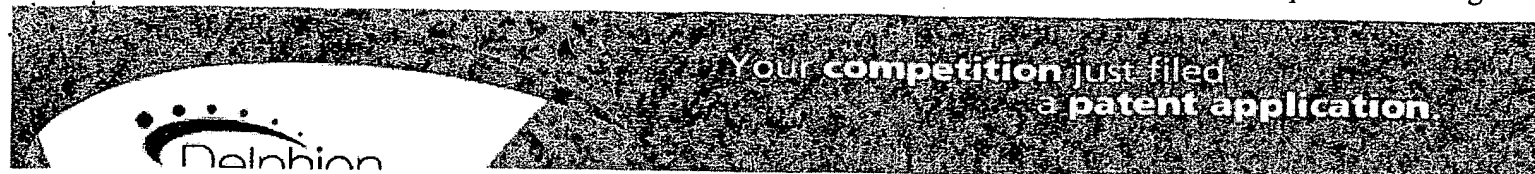
(57) Abstract:

PROBLEM TO BE SOLVED: To suppress a rise in temperature of a battery caused by short circuit by containing a heat absorbing material of a polymer compound having a specified melting point and heat of fusion and a binder such as styrene - butadiene rubber in a positive electrode of a nonaqueous electrolyte secondary battery.

SOLUTION: A nonaqueous electrolyte secondary battery has a positive electrode using a lithium containing composite oxide as an active material, a negative electrode comprising a carbon material capable of absorbing/releasing lithium, and a nonaqueous electrolyte. A polymer compound having a melting point of 90-130°C and a heat of fusion of 30J/g or more (such as polyethylene, polypropylene, and ethylene - ethyl acrylate - maleic anhydride copolymer) is contained in the positive electrode as

a heat absorbing material, and has a globular shape of a mean particle size of 1-12 μ m, and the added content is 10% or less. As a binder, styrene - butadiene rubber, polyvinylidene fluoride, or polytetrafluoroethylene, etc., is contained in the positive electrode. The nonaqueous electrolyte secondary battery capable of satisfying battery characteristics and suppressing the rise in temperature of the battery when short circuit of the battery arose on the inside and the outside.

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Non-aqueous electrolyte for secondary lithium battery - has anode which comprises binder and compound with predetermined enthalpy of fusion and melting as heat absorber

Assignee: **MATSUSHITA DENKI SANGYO KK** Standard company (MATU...)

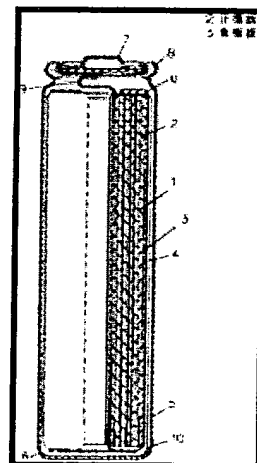
Inventor(s): **none**

Accession / Update: **1998-222647 / 199820**

IPC Class: **H01M 4/62 ; H01M 4/02 ; H01M 10/40 ;**

Derwent Classes: **A85; L03; X16;**

Manual Codes: **A12-E06A(Electrodes) , L03-E01C(Electrolytes) , X16-B01F1(Lithium-based) , X16-E09(Other electrode aspects)**



Derwent Abstract

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(JP10064549A) The battery has an anode (2) which is made up of lithium oxide. A cathode (3) consists of carbon and one of metal oxide, lithium alloy and lithium metal. The cathode and anode are immersed in non-aqueous electrolyte. The anode comprises heat absorber and a binder. A molecular compound with enthalpy of fusion value more than 30 J/g and melting point >90- 130 deg. C is used as the heat absorber. One material selected from styrene-butadiene rubber, poly-vinylidene fluoride, tetra-fluoro-ethylene hexa-fluoride propylene co-polymer and acrylonitrile-butadiene rubber is used as the binder.

Advantage - Suppresses temperature rise during short circuit. Improves characteristics.

Abstract info: **JP10064549A: Dwg.1/1**

Images:

Family: **Patent** **Issued** **DW Update** **Pages** **Language** **IPC Class**
JP10064549A * March 06, 1998 199820 7 English H01M 4/62
 Local appls.: JP1996000222114 ApplDate:1996-08-23 (96JP-0222114)

Priority Number(s):

Application Number	Application Date	Original Title
JP1996000222114	Aug. 23, 1996	NONAQUEOUS ELECTROLYTE SECONDARY BATTERY

Extended Polymer Index:

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Related Accessions:

Accession	Type	Derwent Update	Derwent Title
C1998-070102	C		
N1998-176504	N		
2 items found			

Title Terms: NON AQUEOUS ELECTROLYTIC SECONDARY LITHIUM BATTERY ANODE COMPRISE BIND
COMPOUND PREDETERMINED ENTHALPY FUSE MELT HEAT ABSORB

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